

CLAIM AMENDMENTS

Claims 1 through 13 (canceled)

1 14. (Currently amended) A method of diagnosing
2 a colorectal carcinoma having at least one HERG potassium channel
3 in a patient suspected of suffering from ~~a colorectal cancer~~ said
4 disease, which comprises the steps of:

5 (a) obtaining from the patient a biopsy of
6 colorectal tissue, lymph nodes or a sample of body fluid or stool,
7 wherein the colorectal tissue, lymph nodes, body fluid, or stool
8 are free of HERG channels in a patient free of colorectal cancer;

9 (b) detecting as a selective tumor marker
10 ~~[[the]]~~ any presence of at least one HERG potassium channel in the
11 biopsy of colorectal tissue, lymph nodes, or in the body fluid or
12 stool; and

13 ~~[[©]]~~ (c) relating ~~[[the]]~~ detection of any
14 presence of HERG potassium channel in the biopsy or sample to the
15 diagnosis in the patient of colorectal carcinoma having at least
16 one HERG potassium channel.

1 15. (Currently amended) The method of diag-
2 nosing colorectal carcinoma having at least one HERG potassium
3 channel in a patient defined in claim 14, wherein according to step
4 (b) any presence of the selective tumor marker is detected by
5 either reverse transcriptase/polymerase chain reaction or through
6 formation of a detectable complex formed between the HERG potassium
7 channel and an antibody thereto.

1 16. (currently amended) The method of diagnos-
2 ing colorectal carcinoma having at least one HERG potassium channel
3 in a patient defined in claim 14, wherein according to steps (b)
4 and [[©]] (c) any [[the]] presence of HERG potassium channel as a
5 selective tumor marker is detected by isolating cellular RNA from
6 the biopsy, treating the isolated cellular RNA with reverse tran-
7 scriptase to obtain cDNA, performing reverse transcriptase/polyme-
8 rase chain reaction analysis on the cloned DNA to amplify the cDNA
9 and to detect in the cDNA, a genetic marker for the HERG potassium
10 channel, and relating [[the]] detection of any presence of the
11 genetic marker for HERG potassium channel to colorectal carcinoma
12 having at least one HERG potassium channel in the patient.

1 17. (currently amended) The method of ~~detecting~~
2 diagnosing colorectal carcinoma having at least one HERG potassium
3 channel in a patient defined in claim 14, wherein according to
4 steps (b) and [[©]] (c) any [[the]] presence of HERG potassium
5 channel as a selective tumor marker is detected by staining a
6 section of the biopsy, incubating the section of the biopsy with
7 rabbit anti-ERG1 HERG as a primary HERG antibody, capable of
8 reacting with HERG potassium channel to form a complex, treating
9 the complex with a visual aid to visualize the primary HERG anti-
10 body, and detecting a homogeneous brown stain indicating that a
11 reaction occurring between the primary HERG antibody and the HERG
12 potassium channel in the biopsy to form a complex, and relating
13 formation of the complex to colorectal carcinoma having at least
14 one HERG potassium channel in the patient.

1 18. (New) A method of diagnosing a colorectal
2 carcinoma having at least one HERG potassium channel in a patient
3 suspected of suffering from the disease, and in the event that
4 colorectal carcinoma having at least one HERG potassium channel is
5 diagnosed in the patient, treating the patient for the disease,
6 which comprises the steps of:

7 (a) obtaining from the patient a biopsy of
8 colorectal tissue, lymph nodes or a sample of body fluid or stool,
9 wherein the colorectal tissue, lymph nodes, body fluid, or stool
10 are free of HERG channels in a patient free of colorectal cancer;

11 (b) detecting as a selective tumor marker any
12 presence of at least one HERG potassium channel in the biopsy of
13 colorectal tissue, lymph nodes, or in the body fluid or stool;

14 (c) relating detection of any presence of HERG
15 potassium channel in the biopsy or sample to the diagnosis in the
16 patient of colorectal carcinoma having at least one HERG potassium
17 channel, and in the event of detecting the presence of HERG potas-
18 sium channel in the biopsy or sample;

19 (d) administering to said patient, a therapeu-
20 tically effective amount of 4-[1-{2-(6-methyl-2-pyridinyl)ethyl-4-
21 piperidinyl}carbonyl]methane-sulfoanilide 2HCl sufficient to treat
22 the colorectal carcinoma having at least one HERG potassium chan-
23 nel.